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ABSTRACT

In-class writing assignments using such techniques as non-thought warmups, lead-sentences, completion, rewording, and wordbanks (write a paragraph using a given list of words), and debriefing can be used on a regular basis in the content areas without decreasing time spent on content and without increasing the time spent grading papers. The assignments are designed to be very short and easy to complete. These practical techniques have been tried out in mathematics classes with much success. (RS)

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IN-CLASS WRITING ASSIGNMENTS IN THE CONTENT AREAS

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Dear Colleague,

For the past few years, I've been experimenting with writing as a teaching tool. At first, I didn't even consider using in class writing exercises because I knew writing would take too much time. Yet, writing had helped me to learn and I felt it could also help my students. In January of 1986, I began assigning out of class writing assignments in mathematics [Azzolino and Roth, 1987]. These assignments were so successful that I began experimenting with in class writing. This letter, hopefully this dialogue, is my attempt to share with you writing exercises and strategies you can use in class.

Because writing can be a process requiring much thought, finding time to have students write often prohibits teachers from using writing as a teaching tool. Decreasing the difficulty of the writing exercise can shorten the time required for writing. We know that if a question is too hard to answer, we could ask an easier question. This is the principle we are using. When considerable content must be "covered," in class assignments may need to be short-- out of class assignments might deal with longer and more thought provoking pieces.

Here, term papers, book reports, or technical papers will not be considered. Longer writings have a very important place in any student's education. Please do not consider eliminating the longer in favor of the shorter. Consider which kind of assignment might best achieve your goal.

Here, we'll consider the kinds of writing assignments instructors can use on a regular basis without decreasing time spent on content and without increasing the time spent grading papers. You probably use some of the techniques already. They are: wordbanks, rewording, lead-sentences, completion, debriefing, and non-thought warmups. These ideas could also be used in making

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a medium length or longer writing assignment.

Completion, lead-sentence, and non-thought warmups go together. We'll consider these first.

COMPLETION

COMPLETION --give the beginning of a sentence and have the students complete the sentence. This technique is appropriate for beginning a text or for focusing a writing on a specific topic, such as trouble spots, feelings, definitions, summaries, lists. Examples follow.

1. Complete: The most confusing thing today was ___.
2. Complete: A noun is ____.
3. Complete: Xxx and yyy are similar because ___.
4. Complete: Today we learned about something called ____.
5. It is important to document a computer program because ___.

LEAD SENTENCE

If you add an extra sentence, you're using the lead sentence technique. LEAD SENTENCE--give a sentence and have students write a second sentence or a paragraph. This technique is handy for explaining an idea or writing a definition or creating a word problem (Watson, 1980). For example:

1. The Declaration of Independence is a very important document. It ___.
2. The factors of 18 are 1, 2, 3, 6, 9, and 18. Factors are numbers which ___.
3. Mammals are warm-blooded. This means they ___.
4. A noun is the name of a person, place, or thing. A pronoun is ____.

NON-THOUGHT WARMUP

NON-THOUGHT WARMUP--given a question which may be answered without much though, have students answer a second question on the same topic but which requires more thought. You use this technique if, when writing a test, you start the test with an easy question. For example:

Complete: Lines which are parallel have the same ___.

State the equation of a line which is parallel to $y = 4x + 2$.

REWORDING

REWORDING --give a statement, definition, or procedure, and have the students reword or rewrite the it using different terms or using their own words. This technique is a good diagnostic tool, a good reinforcer, and a good way of personalizing content.

We can ask students if they heard or understood what we've said and hear the answer "yes." Rewording is a way of proving they have heard and understood. Rewording is also a way of assisting students to personalize and internalize what we try to teach.

If writing assignments are kept short, they can easily and regularly be used in the classroom. Some of the following formats of rewording are short enough to complete in class and still complete the lesson. Some are suitable for in class use but require more time than normally allocated to teach a lesson. Still others are lessons in themselves or should be out of class assignments. As you read each format, think about whether it could be used in class as usual, would require more class time than usual or should be used out of class.

1. Make a statement. Ask students to write exactly what you just said, quoting you as closely as possible.

2. Make a statement. Ask students to restate in their own words what you just said.

3. After asking a question, ask students to restate the same question in another way.

4. Use or explain or write a formula or equation. Have the students copy the formula and using arrows label each variable with a word. For example:

5. Write an equation. Have students translate the equation into a sentence in English. For example: $P(q) = R(q) - C(q)$ means Profit equals revenue minus cost.

6. Have the students read a familiar question or problem. Ask them to write their own question like the first question and then answer this question. For example: Given: "Nancy bought a record. She had a $ 5 bill and the record cost $4.50. How much change did she get?" Have students write a similar, or easier, or more difficult story problem. (This exercise is also a good springboard for word problem or even problem solving activities [Azzolino, 1987].)

Here are my comments on the different formats. How did yours compare?

One, 2, 3, perhaps 4, and perhaps 5 I consider in class activites. These act as an echo or as punctuation of the lecture.

Four, 5, and perhaps 6 lengthen lecture time. These are valuable questions to ask and have students write about, but may require longer time for thought and completion.

I consider 5 and 6 out of class assignments. Entire writing lessons could be developed using these formats.

WORDBANK

WORDBANK --given a list or bank of words, write a sentence or paragraph using two, three, ..., or all of the words. This techniques is handy for writing definitions, relating two ideas (Geeslin, 1977), writing paragraph-long explanations, theorizing about related or apparently unrelated thoughts. Here are some possible formats. Have students:

1. Use the terms xxx, and yyy in the same sentence.

2. Use the words xxx, yyy, and zzz to help you write a definition of aaa.

3. Use a wordbank terms in writing a question.

4. "Free write" about four or five key words on the board (Sanders, 1985).

5. Write a true sentence or paragraph using the words xxx, yyy, and zzz but without using the words aaa or bbb. (for example: Write a true sentence using the words "rectangle" and "square" but without using the word "always.")

6. Write a paragraph which includes as many of the wordbank words as

possible.

7. Write a paragraph relating two ideas (Geeslin, 1977).

Each of the above ideas has been presented as an exercise an individual student could do without interacting with the rest of the class. They are valuable exercises as is. The idea of having students write and then use their own texts as something to contribute to class discussion is also an excellent strategy. Think of how this interaction technique could be used to prepare for a test or bring closure to a lecture. Wordbanks and debriefing are truly powerful tools for achieving these goals.

DEBRIEFING

DEBRIEFING--complete a procedure, reading, or lecture, then have the students list important ideas, list the steps in the procedure just completed, state the most important idea discussed, or list new words. Formats for this activity include:

1. After completing a procedure or algorithm, ask students to explain or state what you did in a specific step.

2. After completing a procedure or algorithm, ask students to list the steps needed to complete the algorithm.

3. Have students summarize the lecture in a standard format:

Title of Lecture:_____ Date:_____ New words:_____

This lesson taught me: _____

or

List the major topics of lecture:_____

List 2 key words in each topic.

4. List the mistakes you made on the homework, last test, or in class.

5. List 4 different topics in this chapter.

It should be noted that this sort of summarizing can be habit forming and beneficial. It truly forces one to reconsider and review what's come before. It doesn't take the place of taking notes, it does help organize material

presented.

THERE IS TIME TO WRITE

The times I use writing to teach are times that are comfortable for me. As I grow and experiment with using writing, I find more times that are appropriate. I use writing in my classes:

1. at the beginning of class when the students are still settling down and before I even unpack my text and materials (I find wordbanks are great!);

2. when I get a room full of blank stares (I might ask students to reword or debrief);

3. between different topics--as in we've just covered one type of problem and I'm erasing the board before going on to the next type of problem (try a debriefing or completion or wordbank);

4. at the end of class, even with just a minute or two left (debriefing is really valuable).

Here's an example of how debriefing can work. Please debrief yourself by listing 3 new words you read in this letter and then by stating 1 idea or thought which is worth remembering.

I hope you see this letter as the beginning of a dialogue between us. Thanks for listening. Please write.

Sincerely,

Aggie Azzolino

P.S.

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